IN-0509 CS 2661-13

> Shilts, Graves & Associates, Inc. P. O. Box 521 Notre Dame, Ind. 46556 June 5, 1970

Soil and Foundation Consultants Materials Testing Services

Laboratory located at 1119 South Bend Ave.

Scholand Frage Historia

Engineering Planning Services 1520 North Main Street Mishawaka, Indiana 46544

EPA Region 5 Records Ctr.

Gentlemen:

As requested by Mr. Richardson, we have investigated the soil conditions at a site on the west side of Gertrude Street and on the north side of Chippews Street (extended) in South Bend. Indians. The site extends approximately 1650 feet along Gertrude and 1340 feet along the extension of Chippewa. Our investigation has consisted of studying the geology of the area, reading the soil map of the area and making 10 power auger soil borings from 10 to 38 feet deep.

Geology tells us that the site is in the Maxinkuckee glacial moraine area near the Kankakee glacial outwash area, so the soils are likely to be unsorted silts, clays and sands and gravels with a tendency for the layers of sand and gravel to be interspersed with layers of sixt or clay. Shale bedrock is some 200 feet below the surface. Wells in the immediate vicinity are about 100 feet deep and draw their water from about elevation 700 which is 80 to 100 feet below the surface of the site.

The soil map shows that the surface soils on the southeast and north- \ west corners of the site are sands and gravels and the central portion is imperfectly drained silts and clays. At the north central portion the natural surface soil was muck, but this has been covered with fill for many years.

The soil borings were made to determine the character of the soil below the immediate surface. The logs of the 10 soil borings are attached hereto. The soil borings show that the soil in Area 1 and 2 are sands and gravel to depths of about 25 feet where a layer of clay occurs and then more sand and gravel. The water table in these areas is at about elevation 784, because a clay layer keeps the water from percolating downward and Gertrude Street keeps it from flowing easterly to its natural surface outlet. The soil in Area 3 is all silt and clay to depths of 25 and more feet. The water table is about 25 feet below the surface. The soil in-Area 4 is 6 to 8 feet of silty sand underlaid by 7 or more feet of clay and then more sand. The water is pocketed in the silty sand above the clay. Area 5 is the fill area where a thick clay layer underlies the fill and the water is at the natural ground surface.

Cont d

Shilts, Graves & Associates, Inc. P. O. Box 521 Notre Dame, Ind. 46556

and Foundation Consultants reials Testing Services

June 5, 1970

Laboratory located at. 1119 South Bend Ave. Phone 233-6820

Engineering Planning Services

This site is excellent for a properly operated sanitary landfill. Areas 1 and 2 have excellent soil for covering soil. Areas 3 and 4 have deep clays where trenches can be excavated to receive the solid waste. Wells in the vicinity are so deep and protected by clay layers that they cannot be polluted by the landfill.

Sincerely,

SHILTS, GRAVES & ASSOCIATES, INC.

Leroy D. Graves, A.B. Secretary & Treasurer

LDG:gem

Laboratory located at 1119 South Bond Ave. Phone 233-6820

SOIL BORING

Gertrude Street Site

South Bend, Indiana

Boring 1

Depth Feet

0 - 1.0 1.0 - 8.5 8.5 -10.0 Soil Description

Dark brown sandy topsoil Brown silt and sand Gray brown mottled silty clay

Here table studed

Boring 2

0 - 13.0

Brown sand

Boring 3

0 - 13.0

Brown sand and fine gravel

Boring 4

0 - 14 14 - 19

19 - 23

Brown silty clay
Gray silty clay
Brown sand trace clay

- Hotor stale!

Boring 5

0 - 1.0

1.0 -15.0 = =

15.0 -33.0

Brown clayey topsoil
Brown silty clay
Gray silty clay or clayey silt

Cont 1 d

Gray silty clay

Brown medium sand

Mocellaneous Hill

Brown silty sand

Brown silty clay

Water at 16"

Hater at 41

Dark brown sandy topsoil

Gray brown mottled silty clay

Brown silty sand and gravel

Brown silty sand and gravel

tion Consultants

Boring 6

Depth Feet

0 -

1.0

14.0

18.0

Boring 7

25.0

- 0

1.0

6.0

13.0

Boring 10

0

1.0

7.0

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Boring 11

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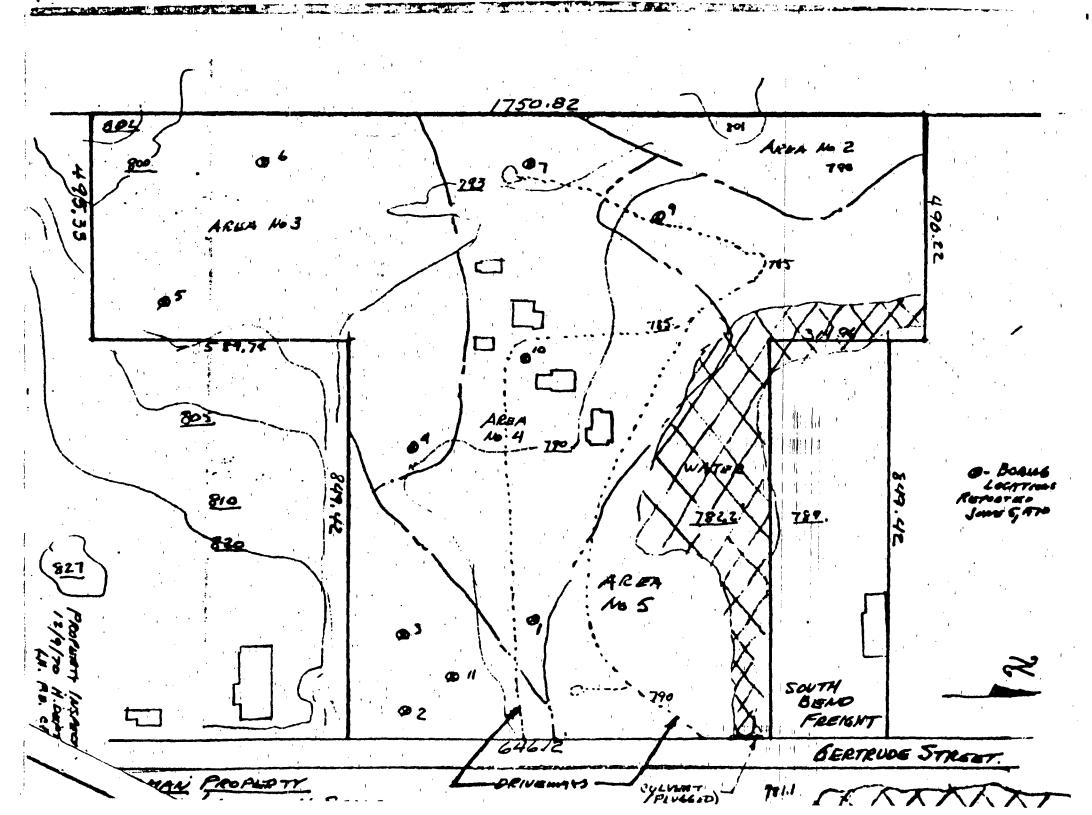
E Services

Laboratory located as

Phone 233-6820

1119 South Bond Ape.

DRILLING . TESTING . ENGINEERING . INSPECTION



STREAM SEWAGE

and INDUSTRIAL WASTE

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